ARCHITECTURE AS A PORTRAIT OF CIRCUMSTANCE:

THE RESTORATION CAREER OF GEORGE EDWIN BRUMBAUGH

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INTRODUCTION

George Edwin Brumbaugh was a restoration architect whose career spanned sixty years. He is a significant figure in the field of preservation because his theories on authenticity, and his knowledge of historic building techniques helped revolutionize the field. Brumbaugh's theories were ahead of his time; the theories he was preaching fifty years ago, are still being practiced, with modifications today.

The intentions of this thesis are to examine how Brumbaugh shaped and contributed to the field of preservation through his theories, techniques, and practices; to demonstrate the application of Brumbaugh's formal education on his process; and to show the development and progression of these theories, techniques and practices.

Case studies were selected to demonstrate the progression of Brumbaugh's theories over the span of his career. The objective for the selection of these case studies was to cover a range of project types, and to choose projects where a substantial amount of information exists. These case studies cover four 10-year periods beginning in the 1940s, twenty years after the opening of his firm, and continuing to the end of his career in the 1980s,

after nearly half a century of preservation work.

In addition to these case studies, this thesis will also briefly compare Brumbaugh's theories to two other restoration architects of his period, Charles Stotz, the restoration architect of Old Economy Village in Western Pennsylvania, and R. Brognard Okie, the re-creator of High Street for the Susquicentennial and William Penn's manor, Pennsbury. This comparison is based on interviews with leading practitioners in the region, and my additional research, and is intended to situate Brumbaugh in relation to his contemporaries.

BIOGRAPHY

George Edwin Brumbaugh was born on August 27, 1890,[1] and was raised in Western Pennsylvania, where he received early exposure to Pennsylvania German architecture from his German ancestors.

When his father became the Superintendent of Philadelphia's schools, Brumbaugh attended Central High School, where he studied under William Gray.[2] William Gray was a history teacher whose strong interest in architecture led him to write the first major essay on architecture in the City of Philadelphia. He would send many of his students to Penn, among them John Harbeson and Harry Sternfeld.[3] In 1913, Brumbaugh graduated cum laude from the University of Pennsylvania with a B.S. in Architecture. He was a perfectionist as an architectural draftsman and a talented watercolorist and was asked to teach a course on watercolor rendering his senior year at the University.[4]

Brumbaugh's early work experience was with Mellor & Miegs and Charles Barton Keen, both offices specializing in historical revival domestic work.[5] This is where Brumbaugh first practiced looking at historic detail which became the basis for his re-creations which were popular with early 20th century clients. Such skills would be useful in renovation

and restoration as well.

Brumbaugh's family supported him in his interests, particularly his father, Martin Grove Brumbaugh who would serve as Pennsylvania's governor from 1915-1919. It was a time when the public was again becoming aware of the State's history. Governor Brumbaugh gave much attention to the preservation of history and was instrumental in establishing the Pennsylvania Historical Commission. Brumbaugh's restoration work reflects a love of history which he no doubt acquired from his father.

By 1916, having taken advantage of the opportunity presented by his father's position, G. Edwin Brumbaugh had established his own office. Until the Depression, he concentrated primarily on new construction. Scores of owners of private residences, more than a dozen churches, several schools, colleges, municipalities and other businesses engaged his services, many of which entailed restoration, with alterations and additions.

The depression marked a turning point for the preservation movement and for Brumbaugh's career. Preservation took on a national significance as the nation began to re-evaluate its identity. It was at this time that the focus of his practice, changed to one of restoration and an interest in historical

architecture. The next twenty years were critical years for Brumbaugh. It is during that period that he applied his mastery of historic building techniques and further developed the theories and practices of preservation. In much of his architectural work, his partner was his wife, the former Frances H. Anderson. Following her death in 1966, Albert F. Ruthrauff became his associate. From the 1940s through the 1970s, Brumbaugh worked on some of the best-known historic properties in the East including: Ephrata Cloister, the Daniel Boone Homestead; Lafayette's Headquarters at Chadds Ford; and numerous buildings in Society Hill.

Of all of Brumbaugh's interests, his greatest was in Pennsylvania German Architecture; for years he served on the Board of Directors of the Pennsylvania German Society. In 1933 Brumbaugh published an important essay on Pennsylvania German Colonial Architecture in the journal, Pennsylvania German Society. He was among the first to identify the unique qualities of the Pennsylvania German farmhouses, leading him to identify and restore many of these structures including Pottsgrove Mansion, Grumblethorpe, and the William Brinton House, all located near Philadelphia.

His philosophies on restoration and historic preservation were developed and implemented between

1939 and 1981, a period in which there was much demand for his service as a lecturer as well as a restoration architect. Brumbaugh spoke passionately of the importance of preservation, Claiming "Old buildings acquire something from their contact with people and events, something which enables them to dramatize the facts of history - to make its actors real people, as nothing else can do."[6] Brumbaugh believed restoration to be the most specialized and sensitive task in the entire field of architecture; one that required years of study, research, experience and complete dedication.

Toward the end of his career, Brumbaugh had become a nationally recognized authority in restoration and historic preservation and received many honors and awards for his work. In 1982 Nancy Reagan presented Brumbaugh with the National Trust's citation for "professional involvement as a meticulous, scholarly architect for almost three-quarters of a century."[7]

Brumbaugh's professional service covered all of the nearby Pennsylvania counties, a considerable portion of New Jersey, with an occasional venture into Maryland and New York. In a talk given in May 1980 Brumbaugh recalled that it had been his "privilege to restore" and thus save, 117 historic buildings open to the public, and many others privately owned."[8] Brumbaugh attracted young architects to his projects

and instilled in many a lifelong interest in preservation. George Edwin Brumbaugh died on November 29, 1983 at his home in Gwynedd Valley, Pennsylvania. At the time he was completing an illustrated book on understanding and restoring surviving early American buildings.[9]

NOTES

1) Sandra L. Tatman and Roger W. Moss. Biographical Dictionary of Philadelphia Architects: 1700-1930. (Boston, MA: G.K. Hall & Co. 1985). p. 114.

2) George E. Thomas and Ann Strong. Book of the School. Forthcoming. p. 202.

3) Interview with George E. Thomas, Clio Group, Inc., Philadelphia.

4) George E. Thomas and Ann Strong. Book of the School. Forthcoming. p. 202.

5) Sandra L. Tatman and Roger W. Moss. Biographical Dictionary of Philadelphia Architects: 1700-1930. (Boston, MA: G.K. Hall & Co. 1985). p. 114.

6) G. Edwin Brumbaugh. "Independence Mall Area: Rebirth of the Old City." American Institute of Architect's Journal." Sept. 1957. V. 28. p. 297.

7) George E. Thomas and Ann Strong. Book of the School. Forthcoming. p. 204.

8) G. Edwin Brumbaugh lecture at Juniata College, May 9, 1970. Lecture notes at Winterthur.

9) G. Edwin Brumbaugh. Unpublished Manuscript, Winterthur Museum.

THEORIES AND TECHNIQUES

Brumbaugh's held that preservation of historic structures was preferable to restoration, and restored buildings were, in turn more potentially valuable than reconstructed ones.[1] This approach remains current today, but Brumbaugh was preaching this theory long before preservation was a public effort.

To Brumbaugh architecture had an inherent social value that affected his conclusions and determined his approach. In a report on Fort Mifflin, Brumbaugh stated, "History, at this juncture, cannot afford to concern itself solely with archives. Its social values stem entirely from its capacity to inspire, to convey useful lessons. Historic buildings and sites, effectively presented and properly understood, are themselves graphic documents of history. And because they are graphic, like the illustrations in a book, they entertain while they instruct, thus reaching a large and willing audience."[2] Until the mid-1950s effective preservation efforts had been largely non-profit, privately conceived, financed and directed. Brumbaugh believed that because architecture had a social value, restoration should be a social responsibility. He argued that there was ample precedent for the use of public funds and that preservation

was both constructive and patriotic.

As a graphic document of history, he argued that architecture always portrayed the thinking of the persons responsible for it. In "Pennsylvania's Contributions to Architecture" Brumbaugh wrote, "The story of America is written in her buildings, where their builders came from, their circumstances, associates, religious views, and most importantly, their experiences and their reactions to them."[3] To Brumbaugh, architecture always recorded the background and the contemporary influences affecting its builders. In an essay which Brumbaugh delivered to the Pennsylvania German Society in 1933, he stated, "Architecture has always been the great story-teller of history, because it has never failed to reflect and express all that is really worth telling about a people. To study architecture by merely measuring the walls and recording the externals, is to miss all of the romance, and most of the charm that surrounds it like a halo."[4]

Brumbaugh was practicing authenticity long before it seemed essential to proper restoration. His practice was to preserve in place as much of the historic building fabric as possible. He was quoted, "I want to leave as much as I can behind. Someday historians will appreciate this."[5] To that end, Brumbaugh claimed that one should preserve in place every possible bit

of old construction. When replacement pieces were required, Brumbaugh would use historic materials where possible, or would produce accurate reproductions using historic tools and building techniques. This contrasts with later theory, much of it based on museum methodology which clearly differentiates between infill and original fabric. As a result, in some restorations modern historians have been confused as to what fabric is original and what is Brumbaugh's reproduction. By contrast, Brumbaugh strove for total authenticity for fear that an unsophisticated audience would be confused by the introduction of modern materials. Brumbaugh instilled this belief of the significance of authenticity in his workers; as he was constantly on the site, patiently supervising and teaching his workers.

The formal training that Brumbaugh received, at Penn taught him to study buildings from the point of view of site and precedent.[6] That training gave him a thorough understanding of architecture history from Greece to the Renaissance. He spoke at length about this in his lectures. Brumbaugh wrote extensively on the history of architecture, and the history of the Pennsylvania Germans. For decades, Brumbaugh traveled through Pennsylvania photographing and studying buildings, and talking to people about local historic

building techniques.

Brumbaugh believed that in order to achieve scholarly restoration each building must be meticulously studied following a process. First, a thorough conditions analysis had to be completed; existing conditions were analyzed and drawn in detail. This visual observation determined those areas where exploratory probes might be useful. Nothing that was found in the exploratory probes, no matter how surprising or contradictory would be ignored, even when the explanation would require research in distant museums.[7] Similarly, Brumbaugh was involved in archaeological site work as early as the 1940s. Once surface and subsurface conditions had been studied, Brumbaugh would draw conclusions which were included as notes on drawings and supported in all cases by evidence. Brumbaugh would then master the historic building techniques followed by the craftsmen and builders and would teach his workers and carefully supervise their work.

Brumbaugh believed that restoration must be both "scholarly and sympathetic." This is a recurring theme in his talks; restoration can't be done by just anyone - it must be scholarly and sympathetic. In a talk he gave in 1981, Brumbaugh stated, "Old buildings saved or restored with proper scholarship, are pages

of history, sometimes more important than the written page. They not only record wars and politics; they are graphic records of the people - how they lived; their hard work, courage, and the things they valued."[8]

By his own training, Brumbaugh was best able to observe and record buildings graphically and this was how he was most comfortable studying them. Historic Structures Reports did not become the standard for documentation until the 1960s. Instead, Brumbaugh thoroughly documented the restoration process graphically and relied on graphic rather than written documentation. Still, in his report on The New Market in Second Street, Brumbaugh stated, "Long experience has taught the writer never to accept, as final, the survey drawings of others." Brumbaugh did hundreds of sketches of the phases and issues of the restoration for each building in order to achieve the precision that he thought was necessary for proper restoration. The renderings which exist are primarily his own, rarely those of his assistants. The level of detail of these sketches ranged from conceptual to precise details of building features. These drawings, however, are filled with notations stating existing conditions, descriptions of complicated or extinct building methods, and descriptions of work that Brumbaugh intended to complete. By the late 1960s and 1970s Brumbaugh did

conform to the norm by producing Historic Structures Reports; however, these did not achieve the level of detail that today's reports contain.

Brumbaugh was personally adept at all building trades, and was knowledgeable of many lost crafts and methods. In his essay to the Pennsylvania German Society, Brumbaugh discussed six ways that German log houses were constructed and remarked that he had tried most of them. Brumbaugh was also knowledgeable on Pennsylvania German interiors and also wrote of the characteristic features of the interiors of these early houses in the essay.

Brumbaugh demonstrated a strong preference for Pennsylvania German Architecture, and a good percentage of his professional career was spent restoring these buildings including several in Germantown and in the hills in neighboring counties. In Brumbaugh's 1933 essay which was delivered to the Pennsylvania German Society, Brumbaugh began to define the characteristics of Pennsylvania German Architecture in some detail. He was the first to begin to analyze these buildings, and the first to establish them as a building type.

NOTES

1) G. Edwin Brumbaugh. "Fort Mifflin on Historic Mud Island in the Delaware River, Philadelphia." Report to the Greater Philadelphia Movement. November 1959. p. 10.

2) G. Edwin Brumbaugh. "Fort Mifflim on Historic Mud Island in the Delaware River, Philadelphia." Report to the Greater Philadelphia Movement. November 1959. p. 10.

3) G. Edwin Brumbaugh. "Pennsylvania's Contributions to Architecture." Pennsylvania's Contributions to the Professions. Homer Tope Rosenberger Ed. Proceedings of the Second Rose Hill Seminar. (Gettysburg, PA: Times & News Publishing Co. June 13, 1964). p. 51.

4) G. Edwin Brumbaugh. "Colonial Architecture of the Pennsylvania Germans." Pennsylvania German Society. Proceedings and Addresses. Lancaster, PA. Oct. 17, 1930. V. 41. p. 51.

5) George E. Thomas and Ann Strong. Book of the School. Forthcoming. p. 203.

6) George E. Thomas and Ann Strong. Book of the School. Forthcoming. p. 203.

7) Barbara Barnes. "Architect Aims to Leave Documents for the Future." Bulletin Home Edition. Brumbaugh Collection at Winterthur.

8) G. Edwin Brumbaugh lecture at the residence of Mrs. Kathryn Stoler, May 18, 1981. Lecture notes at Winterthur Museum.

9) G. Edwin Brumbaugh. "Report of Research and Investigations Relevant to the Restoration of the New Market In Second Street South of Pine Street." 1958.

CASE STUDIES

To demonstrate the progression of Brumbaugh's theories and practices over time, four case studies were selected. These four projects cover a forty year span of his career beginning in the 1940s, when his theories and techniques had developed, and continuing through the 1970s, with one of his later projects. It was intended that the selected projects would have substantial documentation available, and would cover a wide range of project types.

The first case study that was selected is Pottsgrove Manor, an outstanding example of high style Colonial architecture located in Pottstown, Pennsylvania. Pottsgrove was built in 1752 and was the home of John Potts, iron master, and the founder of Pottstown. Brumbaugh restored Pottsgrove for the State in the 1940s; this was his first major project.

The second case study selected is the Ephrata Cloister, an 18th century community of German millenial pietists, located in Ephrata, Pennsylvania near Lancaster. There, Brumbaugh worked on nine buildings, the earliest dating to 1734. The restoration was conducted by the Pennsylvania Historical Commission; Brumbaugh worked on it from 1942 to 1960.

The third case study is the Second Street Market located on 2nd and Lombard Streets in Philadelphia.

The shambles was built c. 1740 and the Head House c. 1800, making it the oldest open air market still standing in Philadelphia. Brumbaugh restored the Second Street Market for the City of Philadelphia in the 1960s.

The final case study is the Village of Fallsington, located in Bucks County, Pennsylvania. That village, consisting of over 90 buildings from the 17th, 18th and 19th centuries, was significant as a religious, social and market center for the surrounding community. Brumbaugh was commissioned to restore three buildings at Fallsington in the 1970s; this was one of his final projects.

POTTSGROVE MANOR

The restoration and interpretation of historic sites is influenced by changing attitudes and values in society. Each generation has their preferences and finds their own focus. Nowhere is this more evident than at Pottsgrove (see illustration 1).

Pottsgrove exemplified Brumbaugh's contention that patient training of workers on historic building techniques is essential to proper restoration.

Pottsgrove was in a state of disrepair when a descendent of John Potts, Mrs. James I. Wendell, acquired the property in 1930. Mrs. Wendell, acting alone, contacted Brumbaugh, requesting his services as a restoration architect. The Great Depression was in its 10th year, and measures to combat it were taking hold. Among the successful "pump priming" actions of the government was the establishment of the "Works Progress Administration" (W.P.A.), which sought to employ skilled and unskilled, men and women. The official in charge of the regional W.P.A. had promised Mrs. Wendell a competent foreman and the best men available to restore Pottsgrove. In spite of his own lingering doubts, Brumbaugh agreed to use the workers, and the restoration began.[1]

By 1942, the exterior of the house was largely

restored. The war put a halt to restoration work and in an effort to keep work going, Mrs. Wendell decided to deed Pottsgrove to the State. An appropriation measure was placed in the legislature to permit the State Historical Commission to continue restoration. Brumbaugh was asked to continue as restoration architect, and agreed to do so.

Brumbaugh studied the building through the comparative method of Bannister Fletcher which he learned at Penn in Alfred Gumaer's History of Art Courses. From that background, Brumbaugh always placed the buildings in the context of local and national history. In his unpublished manuscript, Brumbaugh wrote at length about the history of Pottsgrove, remarking, "Undoubtedly, the most remarkable, and actually the most interesting thing about Pottsgrove is due entirely to its background. That is why we have detailed this history first, at some length, as being the only way the house can be understood; for remember, architecture always portrays the circumstances surrounding its birth."[2]

By the 1940s, Brumbaugh had developed a strict process of restoration which he carefully followed at Pottsgrove. Having completed a brief report on historical research and a survey of existing conditions, he described his proposed building method in a letter

to Mr. K. Hunter, of the Office of the W.P.A., "First of all, it would be helpful if the foreman could have five laborers and three additional men of carpenter status. We shall first all clean the building thoroughly from top to bottom with the laborers. At the same time, there are certain partitions and portions of the structure which the carpenters and foreman can tear out in order to further investigations. I should like to do some outside trenching near the building to search for foundations. Some of the laborers could be assigned to this. As fast as the carpenters tear out, the rubbish should be swept up and removed. The two story porch can be removed, and the materials used to construct a rough shed for the storage of cement and other materials. Finally, I should like to see a shop set up in the back wing of the house, or in a barn, for the manufacture of window frames, etc. By a proper coordination and organization of our efforts, we can keep the men profitably engaged and augment the force as necessary."[3]

As the above document indicates, Brumbaugh was involved in a primitive version of archaeological site work as early as the 1940s. He initiated interior archaeological exploration as well as landscape archaeology at Pottsgrove. In one instance, Brumbaugh conducted rather extensive archaeological excavation

on what appeared to be a slight depression in the lawn, which turned out to be an historic path.

Brumbaugh was commissioned to restore Pottsgrove almost a decade after his essay on Pennsylvania German Architecture, and his understanding of the development of these German features is clearly apparent in his writings on Pottsgrove. In the case of Pottsgrove, Brumbaugh contended that there were strong German influences which were evident in the architecture.

To Brumbaugh, Pottsgrove was a "melting pot house", in that it was English in plan with a spacious hall bisecting the house, but German in construction with a pent roof encircling the house. In fact, the roof is steep for an English house of 1752, and the lack of dormers in the attic would also be evidence of German influence. It is this blending of architectural influences that Brumbaugh believed was part of the romance of architecture in Pennsylvania. For that reason, Brumbaugh claimed that architecture always and inevitably records the background and the contemporary influences affecting its builders.[4]

After carefully restoring the exterior, Brumbaugh then diverted his efforts to the interior. He recorded door thicknesses, locations of original hardware, and radiator types and dimensions, for every room in the building in hundreds of sketches of Pottsgrove.

Many contain precise measurements and details, and were drawn on scrap paper or on 3"x 5" notebook paper. The existing sketches contain a great deal of information on the structural conditions and restoration procedures at Pottsgrove. Often there are checklists of features Brumbaugh intended to investigate on a specific day. Every building element was assigned a numeric code, and was carefully analyzed.

Mrs. Brumbaugh conducted a thorough paint analysis on every room at Pottsgrove and discovered unusual and complicated paint schemes. In some instances, the paint colors which Mrs. Brumbaugh selected have subsequently been determined through later paint seriations and analyses to be inaccurate. Mrs. Brumbaugh's background was in interior design, which may have encouraged her to make "artistic" decisions. Paint analysis had begun in Boston in the 1940s, however, Mrs. Brumbaugh was probably the first in the Delaware Valley area to experiment with this technology.[5]

Brumbaugh's interpretation of one particular room at Pottsgrove is a direct reflection of the attitudes of society during the period of the restoration. He interpreted the room adjoining the kitchen as the "children's dining room". He did, however, recognize that this room had another original use; a servant's quarters. At the time of restoration,

it would not have been favorable to present this space as it originally functioned, thus the creation of the "children's dining room."

Brumbaugh made significant changes to the structure, changes which reflect his willingness to meet the needs of the client. One particular restoration decision has aroused much debate. A sizable two-story stone wing, with a long porch along one side abutted the main house on the rear or north side. It contained a rather narrow cooking fireplace. This, and additional evidence, caused Brumbaugh to assign a date of 1820 to its construction. The State had given the Pottstown Historical Society permission to hold meetings in Pottsgrove, and Brumbaugh decided, for purposes of function to retain this wing and porch, even constructing a small addition, in a comparable style, to serve as a modern kitchen. This decision was in accord with Brumbaugh's belief that additions should be constructed with sympathy to the character of the building, but it makes it difficult to determine what was original. In his unpublished manuscript Brumbaugh writes, "We always feel that restoration should include as little of our design as possible. Where design is unavoidable, we investigate the immediate area, measuring and photographing, to capture regional peculiarities and the "feel" of local contemporary

examples."[6] This of course, can make it difficult for the modern visitor to tell what is original and what is new construction. Still, Brumbaugh's approach provided an aura of history that many Americans prefer, producing sites and buildings without discontinuities between old and new.

Brumbaugh expressed regrets for using the W.P.A. workers in a letter to Steve K. Stevens of the State of Pennsylvania Historical Commission, "Having had some experience with W.P.A. restoration efforts, I am much opposed to anything of this sort. The men on the rolls are never selected for capacity. The direction and planning is seldom expert, and the destruction of important evidence seems unavoidable. At Pottsgrove, where conditions were ideal as to selection of men from the available supply, the results were most disappointing. Fortunately, all the W.P.A. force did was rough work. If we had reached the interior or the fine points of exterior finish before the work stopped by default, I think the battle would have really started."[7]

Currently, Montgomery County is underway with a "restoration of a restoration" at Pottsgrove. They will inevitably be questioning and changing some of Brumbaugh's restoration decisions and interpretations.

Pottsgrove Manor - front facade

NOTES

1) G. Edwin Brumbaugh. Unpublished Manuscript, Winterthur Museum. p. 131.

2) G. Edwin Brumbaugh. Unpublished Manuscript, Winterthur Museum. p. 135.

3) Letter of Correspondence. G. Edwin Brumbaugh to Mr. K. Hunter, Office of the W.P.A. June 17, 1940.

4) G. Edwin Brumbaugh. "Colonial Architecture of the Pennsylvania Germans." Pennsylvania German Society. Proceedings and Addresses. Lancaster, PA. Oct. 17, 1930. V. 41. p. 7.

5) Telephone Interview with Penelope Batcheler, Independence National Historical Park.

6) G. Edwin Brumbaugh. Unpublished Manuscript, Winterthur Museum. p. 144.

7) Letter of Correspondence. G. Edwin Brumbaugh to Steve K. Stevens, State of Pennsylvania Historical Commission. October 9, 1943.

EPHRATA CLOISTER

Brumbaugh's work at Ephrata was based on his intention to reproduce with complete authenticity, the hand-crafted workmanship, materials and appearance of the unique settlement during the 18th century (see illustration 2).

He got the opportunity to work on the preeminent German site in Pennsylvania because in May 1941, the Commonwealth of Pennsylvania acquired 27.5 acres of land in Ephrata, Pennsylvania from the Society of Seventh Day Baptists. This parcel included all of the surviving historic buildings at the Cloister site.[1] With the dissolution of the celibate society the responsibility for the site fell into the hands of the Pennsylvania Historical Commission. The Commission hired Brumbaugh as the restoration architect, following his completion of the Daniel Boone Homestead.[2]

In October 1941, Brumbaugh submitted a preliminary report to the Commission describing conditions at the site, and a proposed plan for restoration of the buildings and the landscape. In this report, he outlined his restoration philosophy, which served as the standard for all work to follow on the site.[3] According to Brumbaugh, "The Ephrata Kloster can be restored along new lines of procedure, differing from the usual method

of treating public shrines, if certain ideals are set up early in the work, and every effort directed toward their achievement. It is not enough to faithfully restore the buildings and replace certain known features of planting. In Colonial times Ephrata was regarded as so unusual that all travelers of importance visited the Kloster. Every effort should be made to restore the atmosphere which attracted visitors in early days. While the actors themselves have vanished from the stage, the setting which they themselves created can be retained to suggest the drama once enacted there."[4]

The theories that Brumbaugh was employing at Ephrata were parallel to the Williamsburg theories of the importance of the "authentic experience" and "atmosphere" at historic sites. This idea of history "coming alive" became a goal for restoration in Pennsylvania.

Brumbaugh had an understanding of theology and how it was portrayed in the architecture at Ephrata. He believed that the buildings at Ephrata, with their great wall surfaces and small windows, suggested their monastic and austere way of life.[5] Form, plan and features of the buildings reflected German originals from the Middle Ages; in fact it was the purest example of continental medievalism in America.[6] To demonstrate this, extensive research was undertaken on Ephrata.

This research included written accounts of visitors to Ephrata dating to the 17th century, early photographs, and theological testaments.

By the mid-1940s, Brumbaugh had established a rigorous process of restoration and followed it at Ephrata accordingly. The first task consisted of the careful removal of all later work which he determined by historic photographs, changing construction methods and techniques. He then studied all evidence and recorded the findings on drawings.[7] His belief of the need for constant supervision prompted Brumbaugh to make hundreds of site visits to Ephrata; eighteen months into the project he had made 45 trips.

In all of the restoration work at Ephrata, the same materials and the same methods originally employed were used, as far as practical. Only damaged or repaired parts of buildings were disturbed unless reconstruction was necessary for safety reasons. In general, only rotted sections of posts and timbers were cut out. Instead of replacing the entire timber, sound pieces of seasoned wood were then bolted in place.[8] These sections were to be carefully marked for easy identification for future historians.

Brumbaugh felt that all original features should be retained, otherwise the restoration would have less educational value. In his manuscript Brumbaugh

wrote, "This writer strongly advocates avoidance of architectural conflict at historic sites, because such conflict is no part of education."[9]

Throughout the restoration of Ephrata, Brumbaugh repeatedly informed the Pennsylvania Historical Commission of his "conviction that preservation is an educational activity, in which fabrication or carelessness is culpable."[10] He felt that any mistakes, architectural or historical would surely be detected.

Brumbaugh strongly felt the need for documenting the buildings, particularly unique building techniques or elements at Ephrata. In his manuscript he claimed to have made careful records of the Saal because, "A building such as the Saal can be ruined without research of this sort, wide experience, and scholarly documentary study."[11] When Brumbaugh discovered a unique or rare element he would document every bit of evidence. He would sketch each significant element and then reproduce it as a careful measured drawing, which became part of the record set of the building (see illustrations 3,4,5).

Drawings and photographs were the historic architect's preferred tool to convey the fabric. When Brumbaugh did compile reports, they tended to be written in the later stages of his projects for the reason which he states in his manuscript: "It

is never our practice to define in positive terms what we have not examined both externally and internally by the "exploratory demolition" process. This is why we are not very keen about early written reports. They can even obstruct, rather than assist definitive conclusions.[12]

When Brumbaugh began work at Ephrata, all of the surviving structures had been much altered; the largest were covered on the outside with various patches of later materials including plaster, shingles, boarding, and all sorts of clapboards.[13] For many reasons the Saal received attention first. The foundations had originally been built upon sharply sloping ledge rock, at some places less than a foot below grade, with the stones set in clay, as a mortar. This insecure foundation was supporting walls which were twisted, sagging and spreading dangerously. In order to repair these extensive problems, Brumbaugh first had to stabilize the building.[14]

In his manuscript, Brumbaugh proved his knowledge of the construction techniques originally employed at Ephrata. In discussing the Saal, Brumbaugh described its unique framing system, the resulting problems, and the necessary repairs: "The entire frame was originally put together with mortise and tenon joints. Where these joints occurred in the end of a beam,

at the top of a post, the beam had to continue at least a short distance beyond the joint on the other side. Otherwise, under great strain, the tenon could slip out of the open side of the mortise, causing collapse. Some sincere but untrained, persons, then in authority, cut off all the beam ends which projected 6" to 8" beyond the wall at mortise and tenon joints. They thus achieved a smooth surface. The whole area was then clothed with sheets of tin, grooved to imitate brickwork. It is most fortunate that the building did not come apart and collapse. We quickly restored all of these projecting beam ends, tying everything together with bolts and concealed steel ties."[15]

The standards which Brumbaugh had established, required a painstakingly accurate, academic restoration of the buildings and grounds. He decided not to use a general contractor because he believed it would be impossible to control the quality of the work. Instead, he hired a small crew of experienced local carpenters and laborers, whom he intended to personally supervise during all phases of construction.[16] This was particularly important at Ephrata where everything was handmade.

Brumbaugh was unyielding in insisting on a high quality of workmanship for the restoration of Ephrata. He felt strongly that restoration projects should

not be let out to competitive bidding, nor undertaken without continuous, qualified supervision.[17] In his specifications he insisted on the use of experts for each trade. Having had experience with the use of W.P.A. workers for restoration projects, such as at Pottsgrove, Brumbaugh was very much opposed to this idea.[18]

Brumbaugh discovered some of the original clapboards of the Saal and was committed to reproducing them using the historic methods and tools. The originals were five feet, two inches long, about seven inches wide, a scant half-inch along one side, and knife-edged along the other.[19] Brumbaugh researched methods of clapboard making, and acquired an antique "frow" for splitting logs. This device was intended to slice the logs in half and make subsequent cuts parallel to this in order to cut off thin clapboards. Brumbaugh tried this method meticulously, but the wood, simply split into cords and ribbons.[20] This method proved to be both costly and time consuming.

After many discouraging attempts, Brumbaugh instituted a deliberate search for an old craftsman whose early experience, or memory of still earlier traditions, could supply his with the forgotten knowledge. This search proved successful, for he discovered an elderly sawmill owner, with the necessary

knowledge. He taught them how to make and use a "splitting rack," capable of controlling the direction of the split. Brumbaugh began producing clapboards with reasonable economy and speed.[21]

In his manuscript, Brumbaugh described in great detail the operation of the "splitting rack." Although he recognized that his description was long and wordy, he felt that it was necessary to record this process so that the knowledge would not be lost again.[22] In addition to hand-splitting clapboards, Brumbaugh's work crew also hand-forged all of the metal fittings for the building, slaked their own lime and split their own oak shingles.[23]

Brumbaugh described the evolution of the exterior finishes of the walls of the buildings at Ephrata in his unpublished manuscript. The back wall of the Saal where covered by the kitchen, was still unpainted and unwhitewashed after more than half a century. For this reason, Brumbaugh elected to use a transparent preservative, rather then any paint upon their exteriors.[24] The authors of the Ephrata Historic Structures Report which was completed in 1987, stated that Brumbaugh coated all new materials with copper napthate in an attempt to provide later researchers and restorationists with a road map to his work.[25] This was probably not the case. Certainly, Brumbaugh

coated all elements in contact with the ground or exposed to weather in an attempt to preserve them from deterioration, and not merely to identify new materials.

In the Bake-House Room of the Almonry, Brumbaugh restored a fireplace on foundations which survived under the sod.[26] However he was minimally involved with landscape archaeology in the mid-1940s. In a letter to Harry Hostetter, a landscape architect, Brumbaugh stated that while landscape was behind schedule, he was arranging for an archaeological investigation of the site with mine detectors.[27] In August 1956, Brumbaugh was appointed as landscape architect for Ephrata, despite having no formal training in the field.[28] Brumbaugh turned down the opportunity, as he felt that as the restoration architect for the project, it may not be appropriate.

The progress of the restoration of Ephrata was slow and costly. When restoration was begun in 1941, its cost was estimated at $225,000. Delayed by the war and slowed by Brumbaugh's meticulous attention to detail, these costs, however, more than doubled.[29] Brumbaugh received much criticism for his slow progress throughout the entire restoration. There were many reasons for this slow progress. In the early stages, slow progress was advised in order to study and evaluate

all evidence with supporting research. One of Brumbaugh's greatest problems was the fact that almost all the material he used, had to be made by hand. War conditions also prevented any large scale operations. In a letter to Harry Hostetter, Brumbaugh wrote, "Mr. Hitler's activities have so affected my practice that I have no stenographers, no draftsmen and a huge stack of unanswered letters."[30]

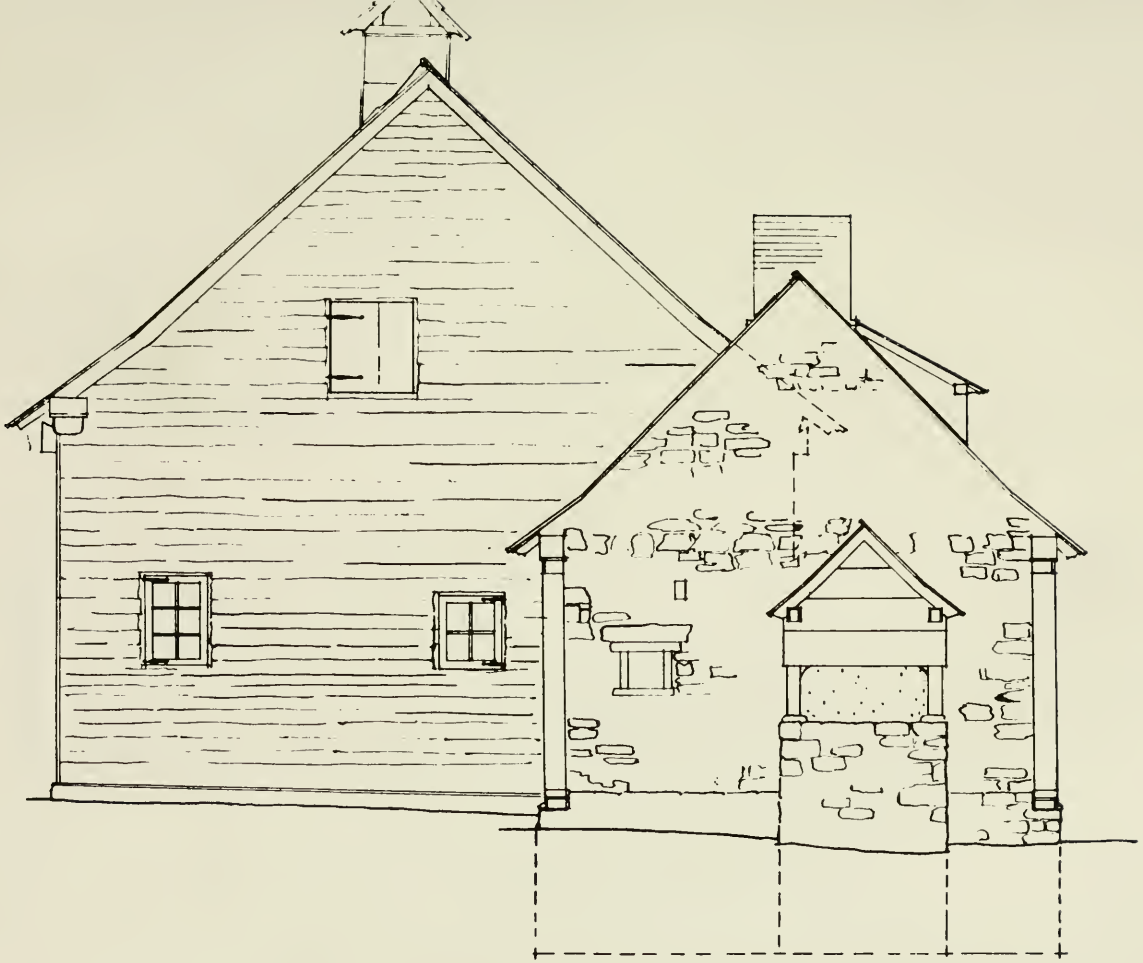
By the end of 1956 the work crew had completed exterior renovations on all of the site's historic buildings. The reconstruction of the interiors of the building interpreted as Beissel's House had been completed, and similar work was underway in the Almonry, where a 19th century wing attached to the southeast side of the building was removed. All of this work adhered to the rigorous guidelines established by Brumbaugh at the start of the project.[31]

In mid-1960, under pressure from local constituencies to press the restoration work forward to completion, the Pennsylvania Historical Commission replaced Brumbaugh with another architect. This action terminated Brumbaugh's 19-year association with the site.[32] The Commission quickly moved to replace Brumbaugh with John Heyl of Heyl, Bond & Miller of Allentown, Pa. A member of the Pennsylvania German Society, Heyl's most attractive feature, in the eyes

of the Historical Commission, was his willingness to contract out the actual work, a practice that Brumbaugh refused to consider; and his promise to complete work on the site in a brief period.[33] The results, as Brumbaugh predicted were unfortunate, with modern industrial materials clashing with the hand-crafted materials of the old buildings and the first phase of construction.

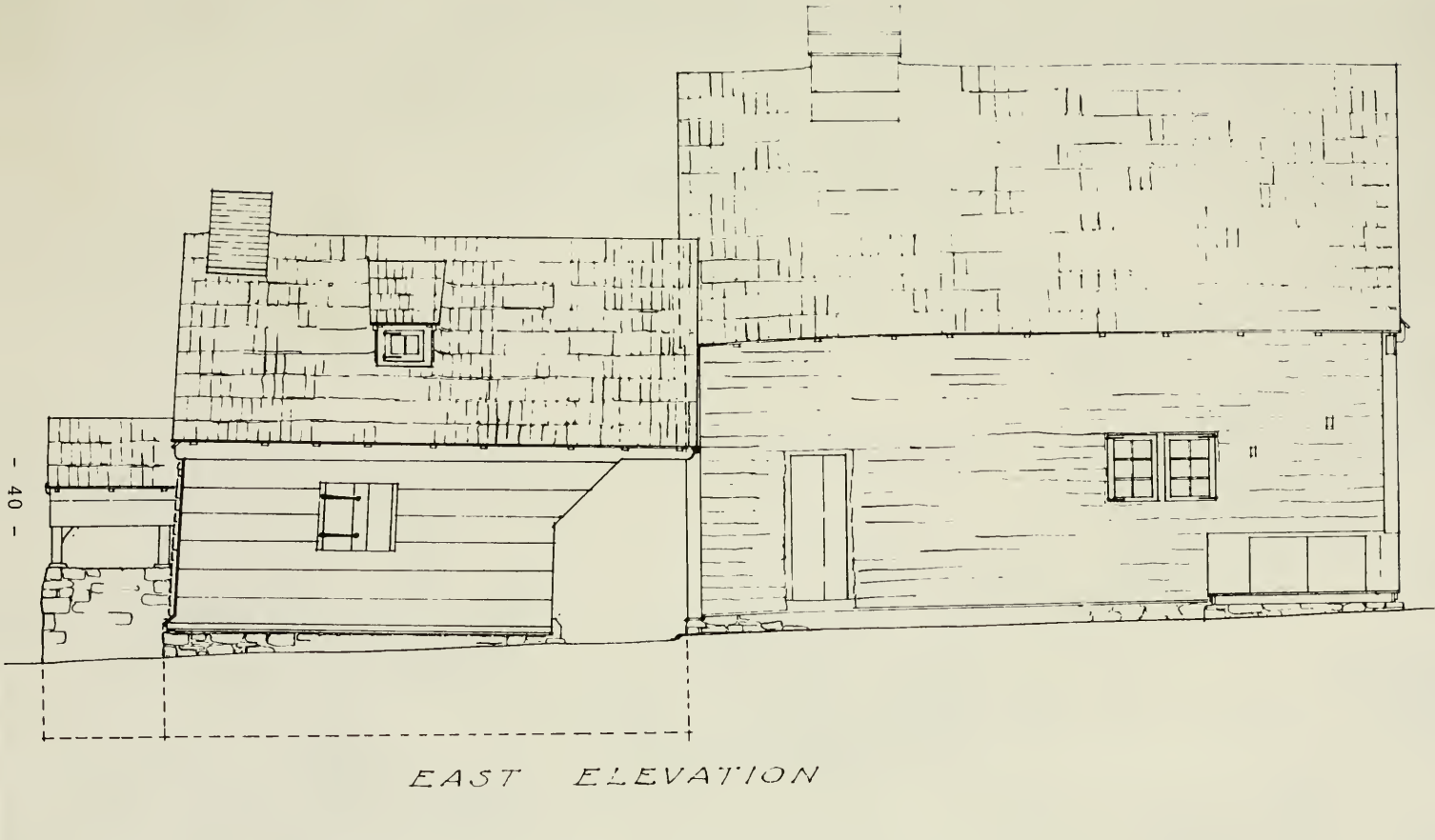
In his own area, Pennsylvania German architecture, the quality of Brumbaugh's work at Ephrata made this the best of his projects.

Ephrata - Saal and Saron



SOUTH ELEVATION

Ephrata - Beissel Cabin and Original Bake-House
South Elevation



Ephrata - Beissel Cabin and Original Bake-House
East Elevation

SOUTH ELEVATION

EAST ELEVATION

NOTE - Walls covered with various replacement materials as indicated. (Tile and stone boards, shingles, clapboards building paper, etc.)

REVISED

SOUTH and EAST ELEVATIONS
SURVEY BEFORE RESTORATION

SARON
Restoration of
EPHRATA CLOISTERS
EPHRATA, Lancaster County, PENNSYLVANIA
E. Evans Shumaker, Registered Architect
Ephrata, Pennsylvania

DATE	COMMONWEALTH of PENNSYLVANIA	SHEET NO.
JULY 17 1940	James H. Duff, Governor	21
SCALE 1/10	DEPT. PROPERTY and SUPPLIES	
	C. M. Woolworth - Secretary	
	HARRISBURG PENNSYLVANIA	

2-2-4

NOTES

1) John Milner Associates, Inc. "Ephrata Cloister: An Historic Structures Report." Submitted to the Pennsylvania Historical and Museum Commission. Harrisburg, Pa. August 1987. Vol. 1. p. 45.

2) John Milner Associates, Inc. "Ephrata Cloister: An Historic Structures Report." Submitted to the Pennsylvania Historical and Museum Commission. Harrisburg, Pa. August 1987. Vol. 1. p. 46.

3) John Milner Associates, Inc. "Ephrata Cloister: An Historic Structures Report." Submitted to the Pennsylvania Historical and Museum Commission. Harrisburg, Pa. August 1987. Vol. 1. p. 46.

4) John Milner Associates, Inc. "Ephrata Cloister: An Historic Structures Report." Submitted to the Pennsylvania Historical and Museum Commission. Harrisburg, Pa. August 1987. Vol. 1. p. 46.

5) G. Edwin Brumbaugh. Unpublished Manuscript, Winterthur Museum. p. 256.

6) G. Edwin Brumbaugh. Unpublished Manuscript, Winterthur Museum. p. 262.

7) Letter of Correspondence. G. Edwin Brumbaugh to Dr. Cadzow, State of Pennsylvania Historical Commission. June 22, 1943.

8) G. Edwin Brumbaugh. "Medieval Construction at Ephrata." Antiques. July 1944. V. 46. p. 20.

9) G. Edwin Brumbaugh. Unpublished Manuscript, Winterthur Museum. p. 264.

10) John Milner Associates, Inc. "Ephrata Cloister: An Historic Structures Report." Submitted to the Pennsylvania Historical and Museum Commission. Harrisburg, Pa. August 1987. Vol. 1. p. 50.

11) G. Edwin Brumbaugh. Unpublished Manuscript, Winterthur Museum. p. 278.

12) G. Edwin Brumbaugh. Unpublished Manuscript, Winterthur Museum. p. 315.

13) G. Edwin Brumbaugh lecture at the residence of Mrs. Kathryn Stoler, May 18, 1981. Lecture notes, Winterthur Museum.

14) G. Edwin Brumbaugh. "Medieval Construction at Ephrata." Antiques. July 1944. V. 46. p. 19.

15) G. Edwin Brumbaugh. Unpublished Manuscript, Winterthur Museum. p. 267.

16) John Milner Associates, Inc. "Ephrata Cloister: An Historic Structures Report." Submitted to the Pennsylvania Historical and Museum Commission. Harrisburg, Pa. August 1987. V. 1. p. 47.

17) Letter of Correspondence. G. Edwin Brumbaugh to Steve K. Stevens, State of Pennsylvania Historical Commission. October 9, 1943.

18) Letter of Correspondence. G. Edwin Brumbaugh to Steve K. Stevens, State of Pennsylvania Historical Commission. October 9, 1943.

19) G. Edwin Brumbaugh. "Medieval Construction at Ephrata." Antiques. July 1944. V. 46. p. 19.

20) G. Edwin Brumbaugh. Unpublished Manuscript, Winterthur Museum. p. 269.

21) G. Edwin Brumbaugh. "Medieval Construction at Ephrata." Antiques. July 1944. V. 46. p. 20.

22) G. Edwin Brumbaugh. Unpublished Manuscript, Winterthur Museum. p. 272.

23) John Milner Associates, Inc. "Ephrata Cloister: An Historic Structures Report." Submitted to the Pennsylvania Historical and Museum Commission. Harrisburg, Pa. August 1987. V. 1. p. 50.

24) G. Edwin Brumbaugh. Unpublished Manuscript, Winterthur Museum. p. 274.

25) John Milner Associates, Inc. "Ephrata Cloister: An Historic Structures Report." Submitted to the Pennsylvania Historical and Museum Commission. Harrisburg, Pa. August 1987. V. 1. p. 52.

26) G. Edwin Brumbaugh. Unpublished Manuscript, Winterthur Museum. p. 297.

27) Letter of Correspondence. G. Edwin Brumbaugh to Harry B. Hostetter, Landscape Architect. March 5, 1943.

28) Letter of Correspondence. Steve K. Stevens, State of Pennsylvania Historical Commission to Honorable John S. Rice, Department of Highways. January 29, 1957.

29) Letter of Correspondence. G. Edwin Brumbaugh to Honorable Baker Royer. August 21, 1952.

30) Letter of Correspondence. G. Edwin Brumbaugh to Harry B. Hostetter, Landscape Architect. September 14, 1942.

31) John Milner Associates, Inc. "Ephrata Cloister: An Historic Structures Report." Submitted to the Pennsylvania Historical and Museum Commission. Harrisburg, Pa. August 1987. V. 1. p. 52.

32) John Milner Associates, Inc. "Ephrata Cloister: An Historic Structures Report." Submitted to the Pennsylvania Historical and Museum Commission. Harrisburg, Pa. August 1987. V. 1. p. 53.

33) John Milner Associates, Inc. "Ephrata Cloister: An Historic Structures Report." Submitted to the Pennsylvania Historical and Museum Commission. Harrisburg, Pa. August 1987. V. 1. p. 53.

SECOND STREET MARKET

By the 1960s, written documentation of restoration projects was increasingly customary and often required for funding. Brumbaugh, however, had elected to document projects by graphic means and to develop most of his conclusions from careful study of comparable buildings and the surviving fabric. He had been trained to study and document buildings graphically, and this was how he was most comfortable studying them.

The restoration of the Second Street Market had been under consideration for many years (see illustration 6). As early as 1912, the Philadelphia chapter of the American Institute of Architects had proposed to restore the Head House and to make the market stalls and the market place into a recreation area for the neighborhood.[1] Nothing came of their proposals. By the 1950s, the market had fallen into a state of disrepair and was slated for demolition in the midst of the restoration of Society Hill, the irony was apparent. In 1957, after much deliberation, the newly appointed Philadelphia Historical Commission requested Brumbaugh's services to restore the Head House and the market.[2]

The project was originally conceived as an urban renewal measure, to change a vacant, dilapidated and

prominent community eyesore, owned by the city, into a restored, historic asset which would spur private capital to improve properties as part of the overall Washington Square East redevelopment.[3] The scope of the project included careful restoration of the Head House and Shambles, as well as paving the entire block-long area, erecting curb posts and lamp posts. A change was made in the existing facade to allow for re-creation of the double doors to the firehouses, all brickwork was cleaned and repointed, and the cupola and roof restored.

Brumbaugh's first task was to discover the date and precise location of the earliest part of this market and to find out whether any appreciable portion of it remained. On the spot investigation proved that under an overlay of tin, asbestos shingles, and brick, the old market, including the 1745 piers and roof framing, remained almost intact.[4] Brumbaugh also found that the Head House had somehow escaped the parade of alterations that obliterated many of Philadelphia's historically significant buildings.

Brumbaugh was required to compile a report on the market, because the Historical Commission refused to authorize restoration work on any structure without prior submission of a written report.[5] The report which Brumbaugh submitted is an 18 page account of

his research findings which illustrate the nature and scope of the problems at the site.

In this report, Brumbaugh concluded that the Head House was one of the finest small structures surviving in Philadelphia; and the shambles, the oldest surviving market structure in America.[6]

The organization of Brumbaugh's report, reflected the restoration process he used. The first, and most extensive section of the report is the "Historical Background." This section emphasized the research behind his restoration plan. The next section entitled "Investigations at the Site," relates to the structural diagnostics which were undertaken. The following section are Brumbaugh's "Conclusions" on the Head House and Shambles. In this section, Brumbaugh revealed the structural condition of the market and Head House, and listed the required restorations. The final section of the report contained the "Recommendations," which included his priorities and the proposed stages of the restoration.

As usual, Brumbaugh began with extensive historical research. The research he conducted for the Second Street Market, included a review of Common Council Minutes, ordinances, historic views, maps, newspaper articles and scrap books.

Brumbaugh's most significant find in doing research

on the Head House, was a photograph of about 1860, in the American Museum of Photography, which showed the Head House cupola at a much earlier date than any other view. This find necessitated recall of completed drawings, and revisions. Upon removal of the sheet iron which covered the cupola, the original moldings were discovered.

Long experience taught Brumbaugh never to accept as final, the survey drawings of other architects. Therefore, he measured the Head House, as well as the surviving original parts of the shambles and prepared detailed drawings (see illustrations 7,8). Brumbaugh felt that a thorough survey was necessary in order to gain a familiarity with the details of the building, as no other process could do.[7] Once he was familiar with the building details, Brumbaugh began the structural investigation. This investigation included the removal of later additions as well as various exploratory probes.

Brumbaugh relied heavily on the information that was obtained from site investigations. In a letter to Grant Simon of the Philadelphia Historical Commission, Brumbaugh wrote, "Data for restoration comes from three sources: written records and documents; testimony of old inhabitants; evidence at the site. Of these, the first often embodies errors; the second sometimes

has substance, although identities can become confused; while the third is far and away the most reliable, if appraised and interpreted by an informed observer.

Structurally, the site hid many valuable clues which only careful exploration could uncover. It had been apparent that the brick piers on each side of the archway, on the Pine Street front, were heavily overloaded. To correct this condition, concealed steel reinforcement was necessary. When the cement floor and brick additions were removed in this area, it was revealed that the original designer had not made the mistake attributed to him. The piers had been adequate, but a later alteration had reduced their size in order to widen the fire engine doors.

Brumbaugh graphically documented the Head House and Shambles using various methods. In his report to the Historical Commission, he included photographs and drawings of the structures during the restoration. These were intended to illustrate the conditions of the site and its surroundings. The drawings included in the report, ranged in detail from quick thumbnail sketches to presentation quality drawings.

Brumbaugh was particularly concerned with the configuration and restoration of the shamble piers. His drawings illustrated the types of construction and proposed repairs of the piers. Also included

in his report are sketches of the methods of construction of the piers, with specific measurements and unique features indicated (see illustration 9).

In a memo to Brumbaugh, Ruthrauff stated, "The only question raised was how to space the new brick piers between the old? The present piers don't exactly line three on each side of the walkway. The worse condition being that the present piers don't line by 6". I told the foreman to center the new brick piers, with equal spaces, between the existing piers. There doesn't seem to be any evidence in the old foundations or wood rafter plate above that would prohibit centering the piers between the existing piers." This description reveals awareness that this tendency to "regularize," is a mistake that architects are prone to make, often resulting in the loss of the rough character of the earlier construction.

Brumbaugh suggested an intriguing scheme for the section of the market below Market Street which had been demolished. He wrote that if and when the character of the neighborhood was to change, this section could become an open square with the center paved in brick with flagstone blocks to indicate the pattern of piers in the demolished shambles.[8] This plan, though never carried out, anticipated Venturi, Rauch and Scott Brown's design for Franklin's Court.

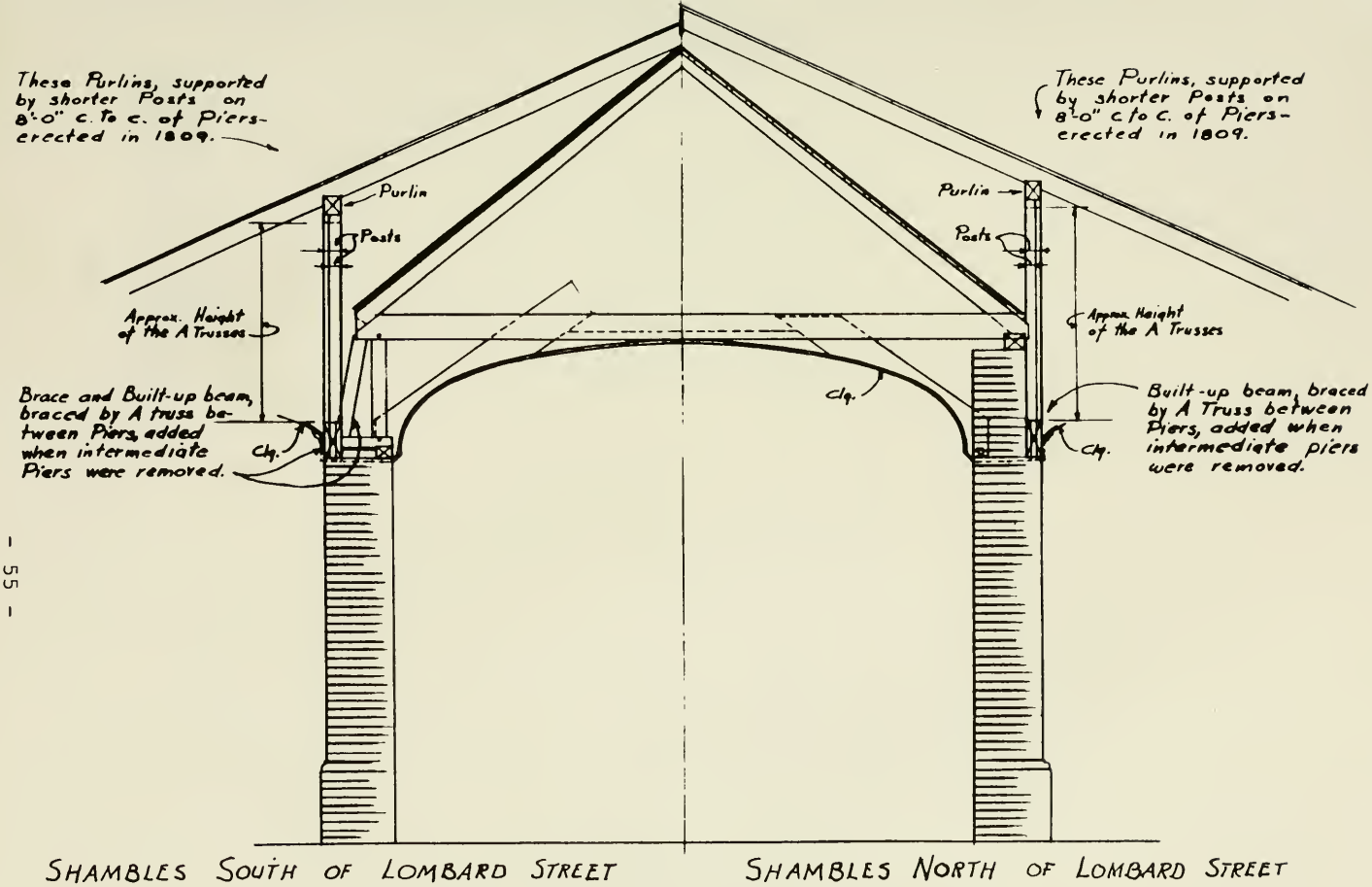
There were many problems, financial and administrative, associated with the restoration of the Head House and Market. Administratively, there were obstacles from the start. Brumbaugh was asked to defer any payment for his services in order to permit the contracts to be signed for the work.[9]

By this time, Brumbaugh was nearly 70 and was not spending the amount of time on the site, as he had on his previous projects. Instead, Albert Ruthrauff, who had become Brumbaugh's partner in the business, was compiling monthly reports for Brumbaugh, on the progress at the site. Ruthrauff felt equally strong about the importance of authenticity for proper restoration. In one report to Brumbaugh on the market, Ruthrauff stated his displeasure in the quality of some of the workmanship he observed at the site. Apparently, the men were using a tool for repointing which Ruthrauff felt was inaccurate. He wrote to Brumbaugh, "It didn't begin to match the character of pointing that is required."[10] He then explained to the workmen the shape of the appropriate tool, and carefully supervised their technique.

The progress of the work was apparently quite slow for a number of reasons, all contributing to the strain in the budget. In 1960, the general contractor, Cardell Company, wrote a letter to Brumbaugh

worn door sills, - but we want it that way. The Head House has been here more than a century and a half. Its scars are honorable."[14]

Second Street Market, front elevation, Head House

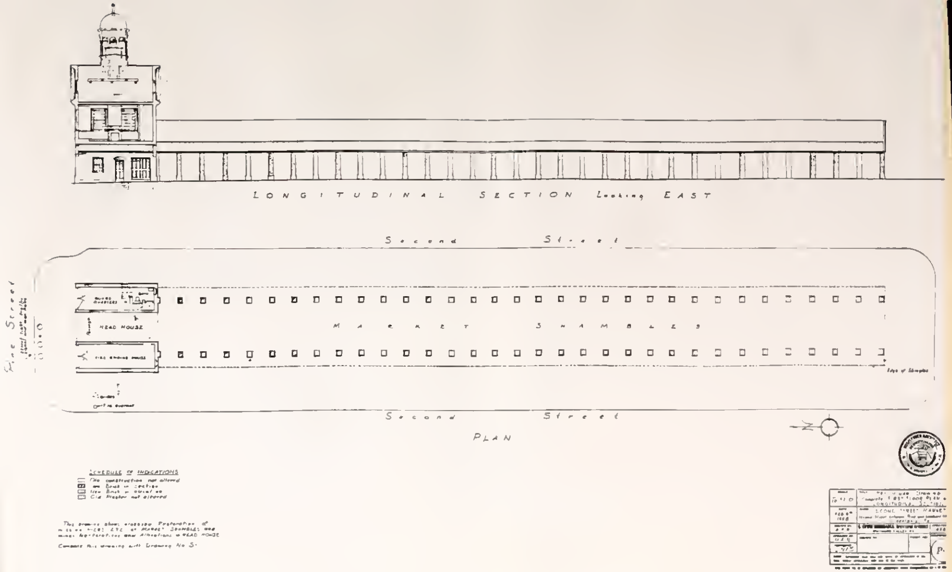


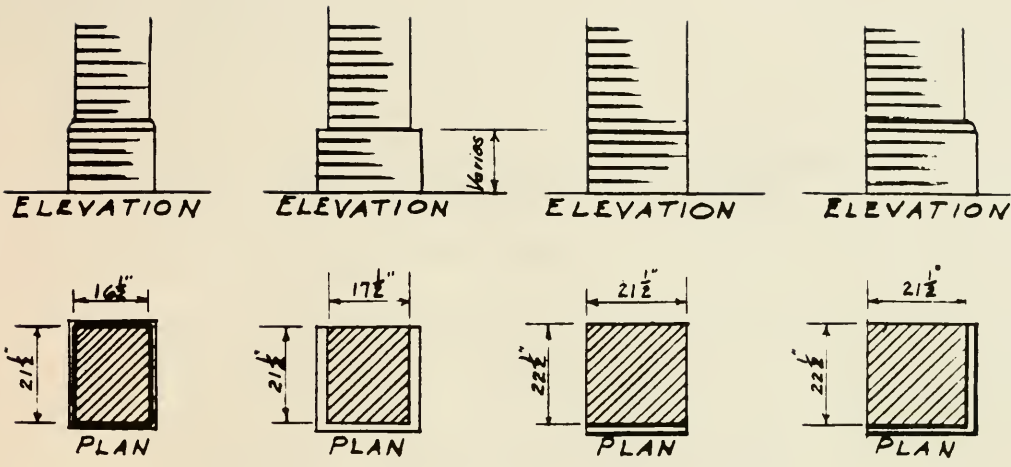
SECTION THRU SHAMBLES AS ALTERED,
Beginning 1809, TO PROVIDE 3 MAIN AISLES

Second Street Market
G. Edwin Brumbaugh. 1958

Second Street Market - Section through Shambles

Second Street Market
Preliminary Drawing
omplete First Floor Plan
and Longitudinal Section


LONGITUDINAL SECTION Looking EAST
Second Street
HEAD HOUSE
MARKET SHAMBLES
Second Street
PLAN
SCHEDULE OF INDICATIONS
Compare this drawing with Drawing No. 5
SECOND STREET MARKET



RECENT PIERS D in the latest reconstruction

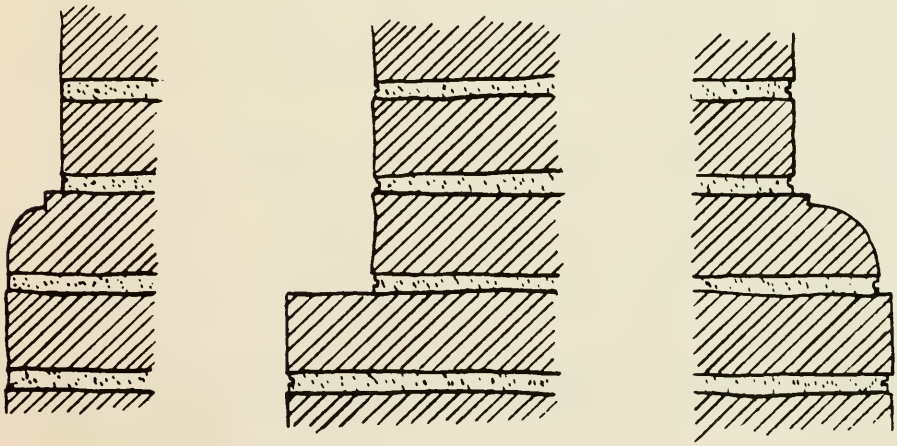
TYPICAL PIER C OF EXTENSIONS Erected 1804

INTERMEDIATE PIER B ORIGINAL Erected 1745

END PIER A SHAMBLES

SURVIVING MARKET PIERS

Scale: 3/8"=1'-0"



RECENT RECONSTRUCTIONS

1804 EXTENSIONS

1745 ORIGINAL

SECTIONS THRU TYPICAL BASE COURSES

Scale=3"=1'-0"

Second Street Market - Sections Through Base Courses

NOTES

1) Margaret B. Tinkcom. "The New Market In Second Street." Pennsylvania Magazine of History and Biography. Oct. 1958. p. 396.

2) Philadelphia Historical Commission Minutes. January 29, 1957.

3) Letter of Correspondence. G. Edwin Brumbaugh to George B. O'Gorman, Procurement Department, City of Philadelphia. June 23, 1960.

4) G. Edwin Brumbaugh. "Report of Research and Investigations Relevant to the Restoration of the New Market In Second Street South of Pine Street." 1958. p. 7.

5) Telephone Interview with Margaret B. Tinkcom, formerly of the Philadelphia Historical Commission.

6) G. Edwin Brumbaugh. "Report of Research and Investigations Relevant to the Restoration of the New Market In Second Street South of Pine Street." 1958. p. 12.

7) G. Edwin Brumbaugh. "Report of Research and Investigations Relevant to the Restoration of the New Market In Second Street South of Pine Street." 1958. p. 9.

8) G. Edwin Brumbaugh. "Report of Research and Investigations Relevant to the Restoration of the New Market In Second Street South of Pine Street." 1958. p. 14.

9) Letter of Correspondence. G. Edwin Brumbaugh to Richardson Dilworth, Mayor of Philadelphia. March 29, 1961.

10) Albert F. Ruthrauff. Series of unpublished reports written for Brumbaugh on the Second Street Market. Winterthur Museum. May 8, 1963.

11) Letter of Correspondence. The Cardell Company, General Contractor, to G. Edwin Brumbaugh. December 17, 1960.

12) Albert F. Ruthrauff. Series of unpublished reports written for Brumbaugh on the Second Street Market. Winterthur Museum. November 31, 1962.

13) Letter of Correspondence. G. Edwin Brumbaugh to Richardson Dilworth, Mayor of Philadelphia. March 29, 1961.

14) Letter of Correspondence. G. Edwin Brumbaugh to Richardson Dilworth, Mayor of Philadelphia. March 29, 1961.

FALLSINGTON

In the 1970s, Brumbaugh was commissioned by Historic Fallsington, Inc., to restore three buildings at Fallsington, the Moon-Williamson Log House, the Stagecoach Tavern, and the Schoolmaster's House (see illustrations 10,11,12). The Moon-Williamson House, c. 1685, is a pioneer log building, which Brumbaugh believed one of the oldest in the state still standing on its original site, an assertion which was later proven correct.[1] This was the most noteworthy of the three buildings that Brumbaugh worked on, as its significance and complexities required 53 site visits to complete the restoration. The Stagecoach Tavern is a late 18th century structure which was operated as an inn from 1799 until Prohibition. The Schoolmaster's House, is a stone house constructed by the Falls Monthly Meeting of Friends in 1758 for its schoolmaster.

Brumbaugh began the restoration process as he always did, with thorough historical research. His sources included, books, traveler's journals, legislative acts, photographs, and the chain of title. He then began investigations at the site with documentation being primarily graphic. Despite the work of his contemporaries and the revolutionary developments

in the photography industry, Brumbaugh continued to take few photographs of work in progress. Rather, extensive site investigations and analyses were undertaken, to determine the history and chronology of the various parts of the buildings.[2] These steps were basic to the formulation of Brumbaugh's restoration policy.

Perhaps as a result of the casual attitude of the client, or because the funding was not available, Brumbaugh was not required to complete a written report for the buildings at Fallsington, as he was for the Second Street Market.

The character of Brumbaugh's office had dramatically changed in the 1960s. By then he had a partner, Albert Ruthrauff, and his staff had considerably increased in size. Brumbaugh was then able to delegate responsibilities to his workers, and as a result, was not personally making the number of site visits that he had in previous commissions. In this case, it was he who made the initial visits to the site, observing and sketching in the early stages of the project; his staff was responsible for the drawings in the later stages. The correspondence between the firm and its clients was also less personal. Brumbaugh no longer wrote to the clients himself, as he had in the past.

Brumbaugh's basic belief in the need for authenticity in restoration in order for the restoration to be of educational value, remained firm. In a letter to Mr. Alfred M. Wildman, President of Historic Fallsington, Inc. Brumbaugh wrote, "As you know, we have very strong views about the necessity for extreme care today to insure the highest level possible of authenticity. Visitors are becoming informed and critical; and this is good. Restoration is an educational and (we hope, in due time) an inspirational effort. It is not a task for anyone without an extensive knowledge of the many factors involved."[3]

There had been several alterations and additions made to the buildings, over the years, at Fallsington. These changes involved the addition of new exterior sheathing, stoops, porches, and interior partitions and finishes. Brumbaugh requested that these elements receive careful study, as he believed that a great many features had been incorrectly restored in the past.[4]

Despite the prevailing practice of the field which typically called for the retention of significant additions, Brumbaugh called for the removal of later additions, to return the buildings to what he determined to be their original state. At Fallsington, he removed major additions, apparently without explanation.[5]

The log portion of the Moon-Williamson House was two stories high. Brumbaugh believed that it was originally one story.[6] He also felt that the second story was not as well constructed as the first story. In a rough draft for a folder to be prepared for visitors to Fallsington, Brumbaugh stated, "The most important educational impact of this building would be achieved by re-creating its actual appearance as an authentic 17th century log structure."[7] For these reasons, the second story was removed. The rear or east wing, however, Brumbaugh believed to be an extremely rare and interesting feature.[8] It was thought to have stood elsewhere originally, as a separate, small, "framed house." It was probably moved to its present location at an early date, to increase the cramped facilities of the log cabin. Brumbaugh chose to retain this wing, creating an artifact which had no historical basis. This remained at the crux of Brumbaugh's career. He was fascinated by craft, and more concerned with early history, often resulting in a collection of fragments with no historical accuracy. This practice was out of step with the attitudes of the historic preservation movement during that era.

Brumbaugh had gained vast knowledge of construction methods from decades of study. The research and site investigation provided Brumbaugh with a complete

understanding of the building elements, but not of the historic totality. In his writing on the Moon-Williamson House, Brumbaugh gives evidence of his great familiarity with the English plan, its elements, and the functions of the various rooms.[9]

In the "First Preliminary Report Upon Exploratory Investigations - Williamson Log House," the only written document existing from his work at Fallsington, Brumbaugh made several assumptions in explaining the chronology of construction. These assumptions were seldom backed by sound evidence or sources. For example, he merely stated, rather then proved by evidence, "The first phase of construction was the west, or log house, which was, at that time, a one story and loft cabin. Evidence indicated that it had a full height, stone-walled basement, with outside steps to grade, covered with sloping cellar doors. This house could have been built in 1685. Structural features, especially original finish, could date from late 17th or very early 18th century."[10]

Brumbaugh obviously interpreted what he saw based on his past experiences and projects, but he failed to explain his statements with tangible proof and specific evidence. As he demonstrated at Ephrata, building evidence is at least as important as written documentation, but to be reliable it needs to be put

into an intelligible framework of contemporary building techniques and methods. Brumbaugh's refusal to prepare written documentation makes it difficult to follow his restoration process. Also, because he did not subject his work to the discipline of the timetable, he ended up with anachronistic structures which never existed.

Fallsington - Moon-Williamson Log House, front facade

Fallsington - Stagecoach Tavern, front facade

Fallsington - Schoolmaster's House, front facade

NOTES

1) G. Edwin Brumbaugh. "First Preliminary Report Upon Exploratory Investigations "Williamson" Log House, Fallsington, Pa." For Historic Fallsington, Inc. p. 1.

2) G. Edwin Brumbaugh. "First Preliminary Report Upon Exploratory Investigations "Williamson" Log House, Fallsington, Pa." For Historic Fallsington, Inc. p. 1.

3) Letter of Correspondence. G. Eewin Brumbaugh to Alfred M. Wildman, President Historic Fallsington, Inc. June 15, 1970.

4) Letter of Correspondence. G. Edwin Brumbaugh to Alfred M. Wildman, President Historic Fallsington, Inc. June 15, 1970.

5) Telephone Interview with LuAnn De Cunzo, formerly of Historic Fallsington, Inc.

6) G. Edwin Brumbaugh. "Possible form of folder for Visitors - Fallsington Day - 1971. Unpublished. p. 2.

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A COMPARISON OF BRUMBAUGH AND HIS CONTEMPORARIES

Two architects were selected to be compared with Brumbaugh to demonstrate a correlation between Brumbaugh's theories and those of his contemporaries. These two architects are R. Brognard Okie and Charles M. Stotz.

Okie graduated with a B.S. in architecture from the University of Pennsylvania in 1897, a generation earlier than Brumbaugh. He concentrated his efforts on the reconstruction and restoration of Pennsylvania Colonial and vernacular buildings. His best known works include, the Betsy Ross House, the High Street reconstructions at the U.S. Susquicentennial in 1926, and Pennsbury Manor.

Stotz was a graduate of Carnegie Mellon University, c. 1915, making him a contemporary of Brumbaugh. Stotz became an expert in the architecture of Western Pennsylvania, as many of his commissions were in this region. In 1936 Stotz published The Early Architecture of Western Pennsylvania. This was a monumental work, a project of the American Institute of Architects and the Buhl Foundation, that investigated 27 counties of Western Pennsylvania to uncover many of the best buildings before 1860. The book, containing more than 400 photographs and more than 100 measured drawings,

demonstrates Stotz's pluralistic approach to thorough documentation.

Ephrata Cloister, Pennsbury Manor and Old Economy Village were three important projects administered by the Pennsylvania Historical Commission under Frank Melvin. Melvin came into the Commission in 1936 and changed the Commission's emphasis from archaeology to historic attractions.[1] It was the success of Williamsburg in particular which gave the Pennsylvania Historical Commission its point of reference.[2] Melvin wanted sites in Pennsylvania such as Ephrata and Old Economy Village to rival Williamsburg, despite the obvious differences between Williamsburg and celibate, millenial Ephrata and Old Economy Village.

In 1936 Okie was commissioned to reconstruct Pennsbury, William Penn's manor (see illustration 13). The philosophy behind the re-creation was true to the Williamsburg approach which created an educational and inspirational site, while not adhering to strict authenticity. Opposition to the project, mostly on the grounds of authenticity, began to surface in professional architectural circles as early as 1934, and became more outspoken as the reconstruction neared realization.[3]

Like Brumbaugh, Okie, who also studied history at the University of Pennsylvania, was determined

to bring authenticity to his projects. His attention to detail was a result of his extensive travels through the Pennsylvania countryside, measuring and collecting details of old farm buildings (see illustrations 14,15). These farm buildings, were a build-up of a myriad of small details. When Okie made an addition to an old farmhouse, it was often difficult to distinguish the old from the new.[4]

This approach of blending new materials with the old was common practice until the 1970's. Okie, Stotz, Brumbaugh, and their contemporaries, all believed that differentiation by using modern materials would confuse the visitors and weaken the aesthetic impact. This contradicts current theory which seeks to differentiate new materials from the old.

Okie demonstrated great concern for the quality of construction materials and craftsmanship. He believed, as did Brumbaugh, that restoration projects should not be open to bid which he felt would inevitably lead to shoddy construction.[5] Okie also used early construction techniques and materials whenever possible.

Despite overwhelming uncertainties, notably no surviving fabric and minimal documentation, Okie was determined to make an accurate reconstruction of Pennsbury. Unfortunately, this was nearly impossible, however, because there was practically no documentation.

Modern restoration architects would not consider Okie's research to be sufficient for the type of restoration which was attempted at Pennsbury. Okie's failure to produce drawings or plans of the house, and more extensive manuscript documentation, would today result in a decision not to rebuild the manor house.

Lacking clear evidence of the original, Okie theorized that Stenton Mansion, the house of James Logan, located in Philadelphia, might have been based on Penn's home, one of Okie's favorite Colonial houses. The similarities were evident from the floor plans to the details. Okie believed that Logan, having spent a great deal of time at Pennsbury, was influenced by the form and details of Pennsbury, and incorporated many of its features into the design for Stenton.

Pennsbury was a project caught between two eras, that of the Williamsburg-Colonial Revival Era, and that of the newer and more sophisticated era which sought to preserve the built environment that existed, not fabricate a false environment.[6] Okie was soon in the center of a controversy and was directly or indirectly blamed for what was thought wrong with the new Pennsbury.[7] Okie's role in the project was actually secondary to that of Frank W. Melvin, the chairman of the Pennsylvania Historical Commission who literally pushed the project through the state

legislature. Melvin wanted the public to participate in history, so he was naturally predisposed toward pageant architecture. As far as the Pennsbury reconstruction was concerned, for him it was authentic enough.[8]

Charles Stotz began his work at Old Economy Village in 1937 (see illustration 16). Stotz, a self-taught rationalist, was like Brumbaugh, a first rate scholar/architect. Ephrata and Old Economy are parallel sites, bearing striking similarities in both the nature of the sites, and the period of the restorations. Stotz's work was comparable to Brumbaugh's in terms of quality and authenticity, but he superseded Brumbaugh's methods of documentation.

Old Economy village was the home of George Rapp's Harmony Society from 1804 until the early 20th century. Economy, much the same as Ephrata, was a celibate, German millenial pietist community. Unlike Ephrata, it was a self-contained establishment, whose economy was based on agriculture and light industry. The buildings at Economy reflected the German roots and the industrial character of the society.

Stotz's firm worked on reports, plans and specification for partial and complete restoration of the Old Economy buildings. In mid-World War II, Stotz presented the Pennsylvania Historical Commission

with a 265-page report on Old Economy. This report carefully outlined the research steps taken for the building repairs and garden restoration. Stotz demonstrated his thorough understanding of the development of styles in America, early builders and craftsman, and their materials and methods.

Brumbaugh's documentation methods concentrated primarily on written documentation and drawings, with minimal photography. Stotz, on the other hand, also compiled written reports and drawings, but relied heavily on photo-documentation. The existing drawings of Old Economy Village, exemplify the meticulous documentation methods of Stotz (see illustrations 17,18,19,20). His drawings were not always accurate in that, like Brumbaugh, he tended to draw what he wanted to see, rather than what really existed.[9] For instance, Stotz proposed that the exterior walls of the Granary be left exposed, rather than whitewashed, because he wanted them to look old.[10] Despite clear evidence on the gazebo he left off the dome in his reconstruction.

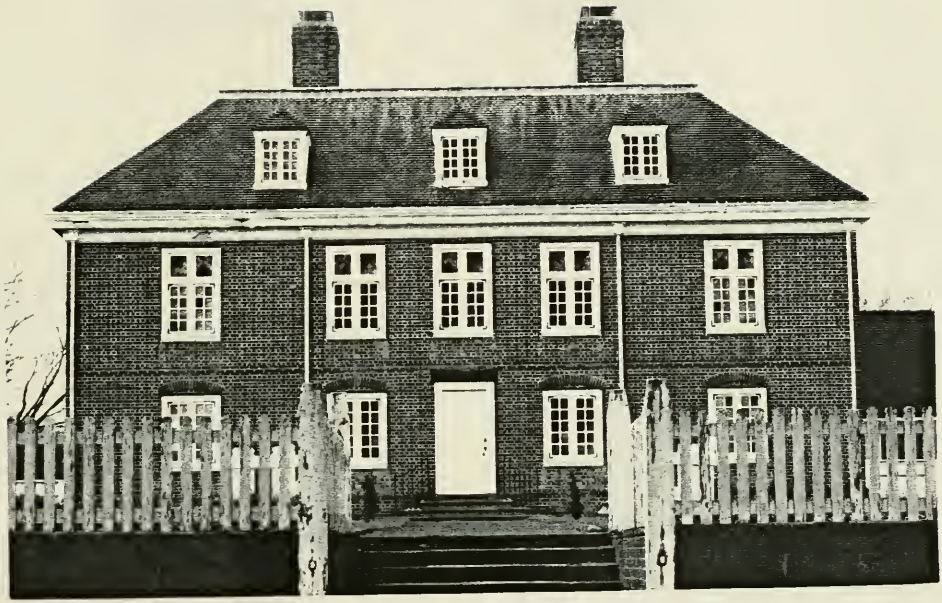
The major difference between Brumbaugh's work at Ephrata and Stotz's work at Old Economy Village was that Stotz was working on a site from the industrial era, while Brumbaugh was working on a hand-crafted site. An important factor in Rapp's site selection,

was its location on the Ohio River. The majority of the materials used for the buildings at Economy could be manufactured in Pittsburgh and brought to the site. Where Brumbaugh was forced to hand-make every building material on the Ephrata site, a process which resulted in a labor intensive and costly project.

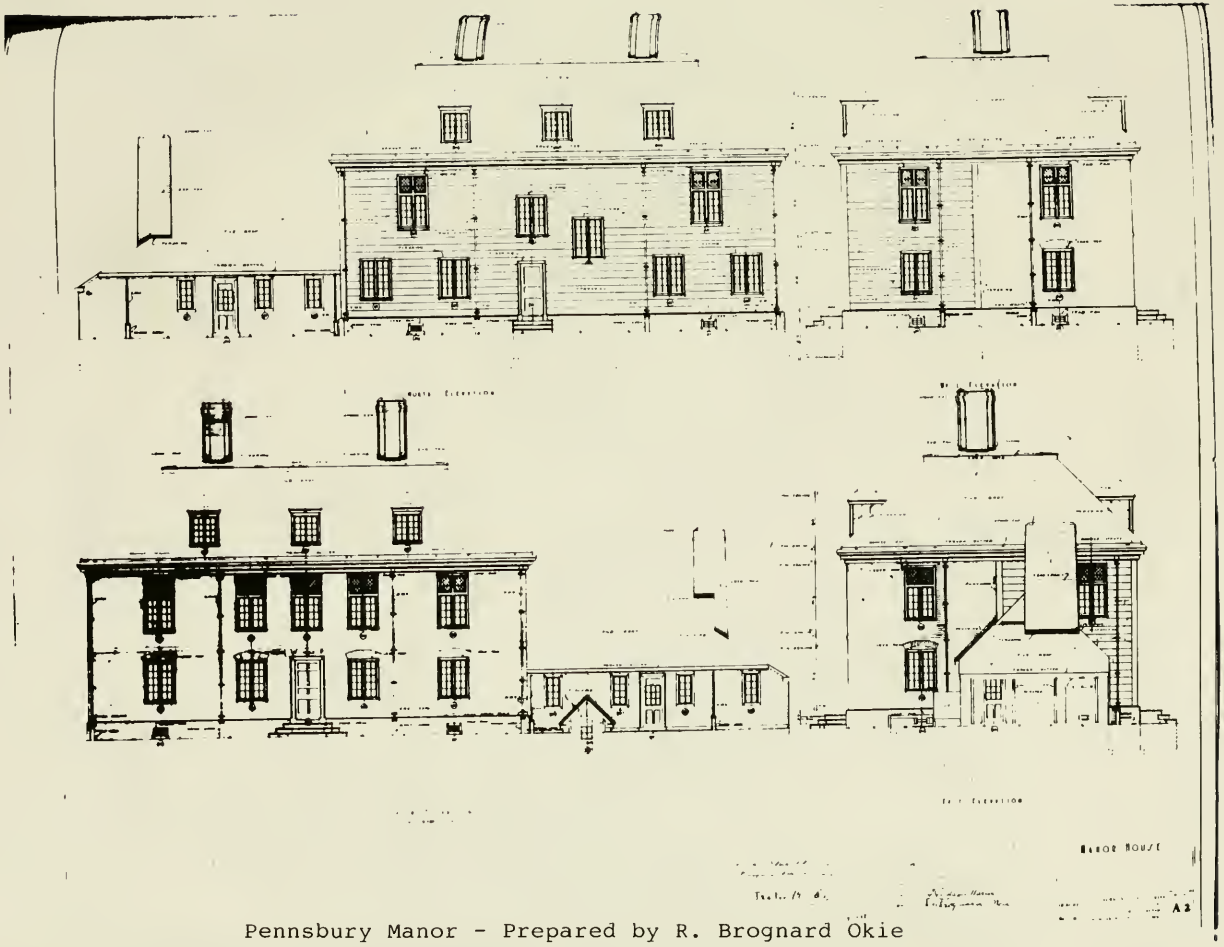
Stotz's work at Old Economy has since been studied by Thomas and Newswanger Architects and Clio Group, Inc. of Philadelphia. Extensive study by these firms, revealed that Stotz's work was sound, though he did fall into several traps.[11] Stotz's restoration of the garden was particularly weak. His proposal for the reconstruction of the garden pavilion did not include a roof on the structure, while it is apparent that there was one.

Like Ephrata, there was never a full commitment to the restoration of these sites on the part of the State. Allocation of restoration funds were made sporadically and in inadequate amounts.[12]

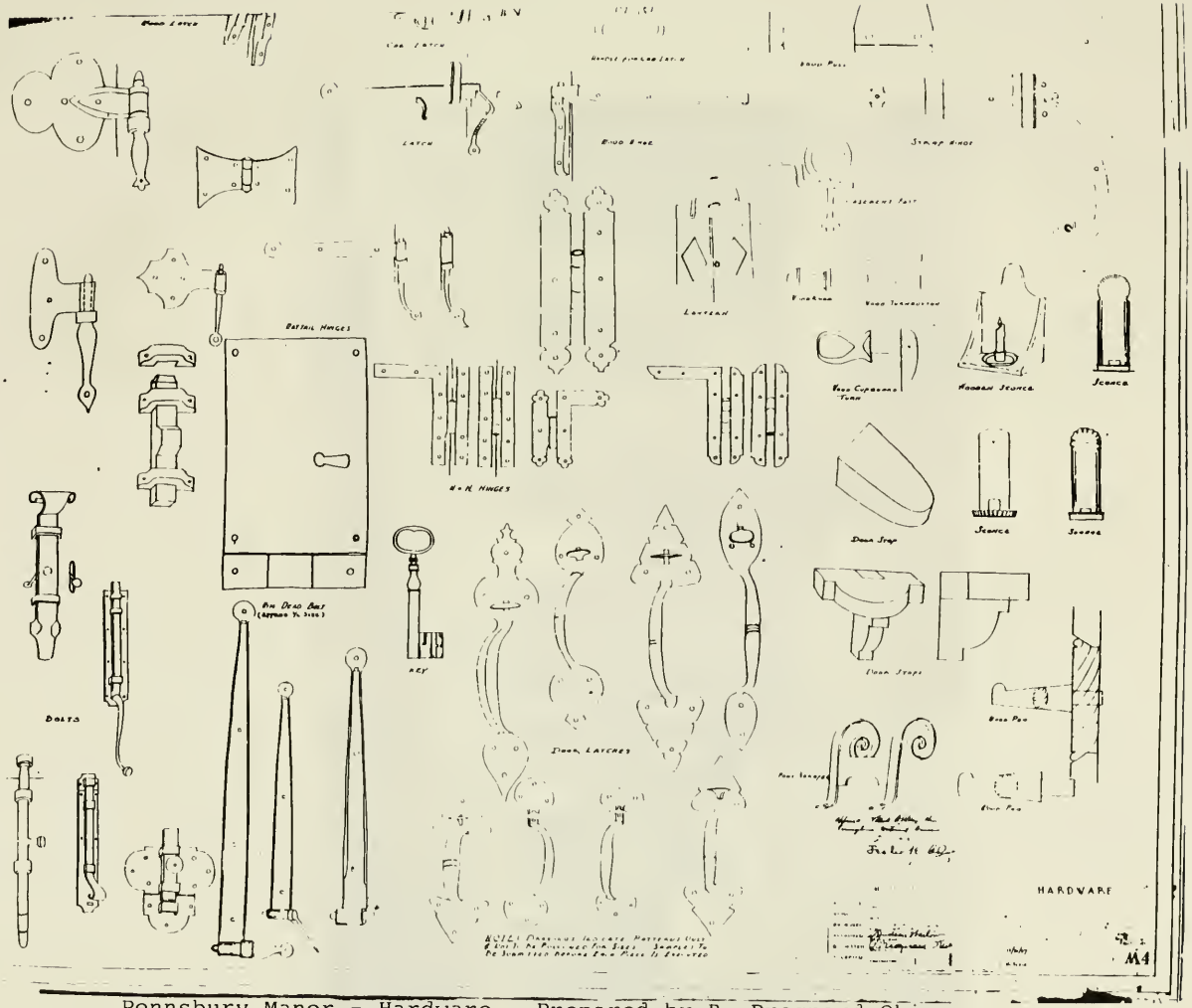
Stotz and Brumbaugh spent an extraordinary amount of time working on the restorations of Old Economy and Ephrata. They both became emotionally involved with their projects, and this may have swayed some of their restoration decisions. These restorations, however, are convincing, quality restorations for their period, and for the available technology.



Pennsbury Manor - front facade

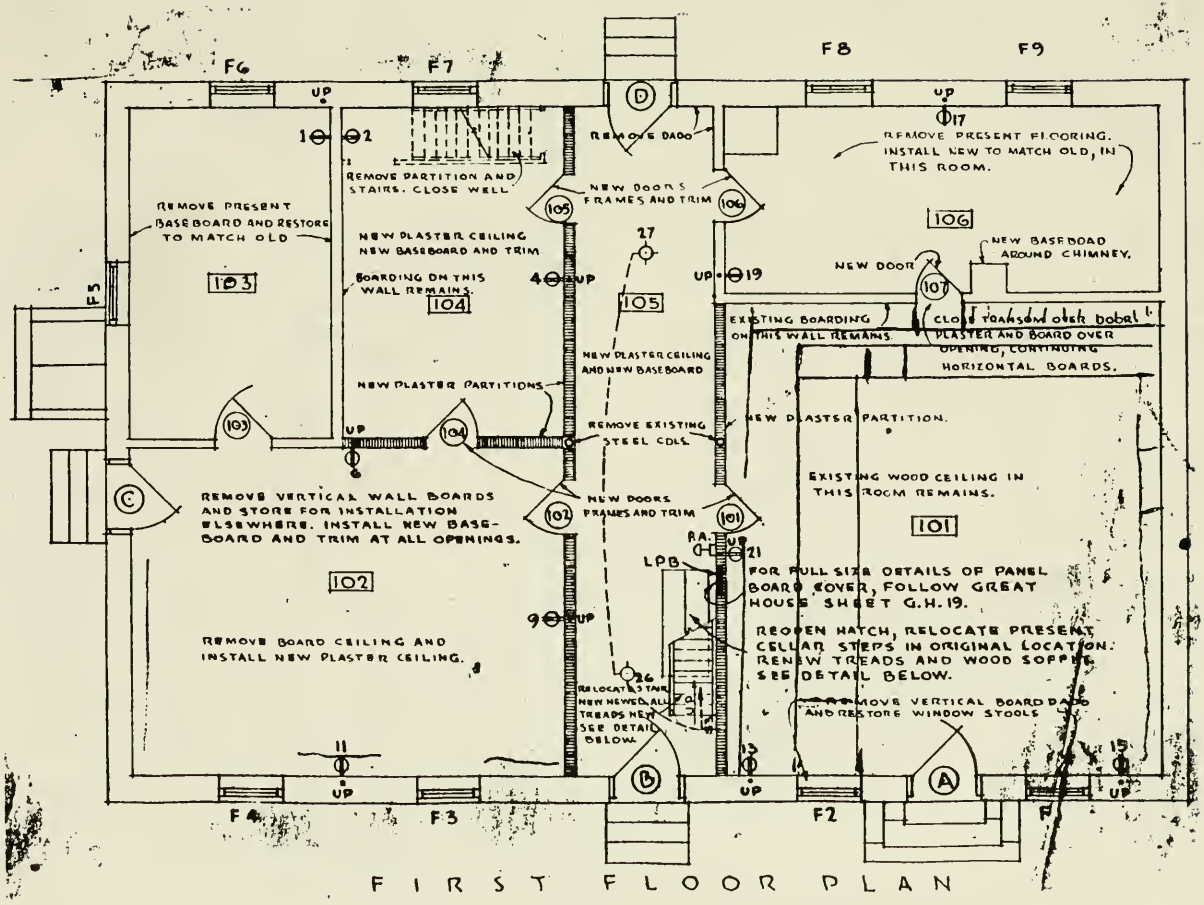


Pennsbury Manor - Prepared by R. Brognard Okie

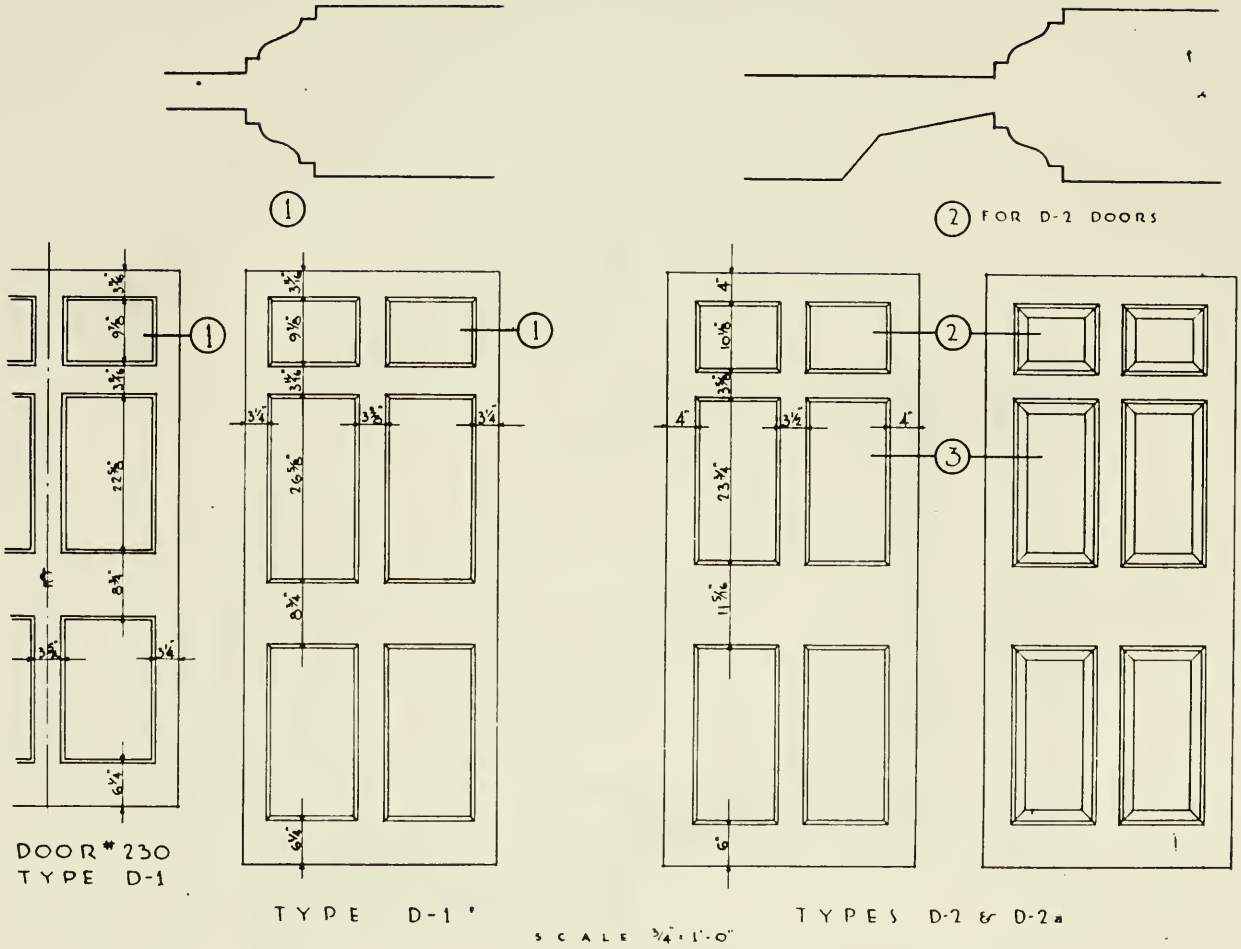


Pennsbury Manor - Hardware - Prepared by R. Brognard Okie

Old Economy Village - Great House, front facade

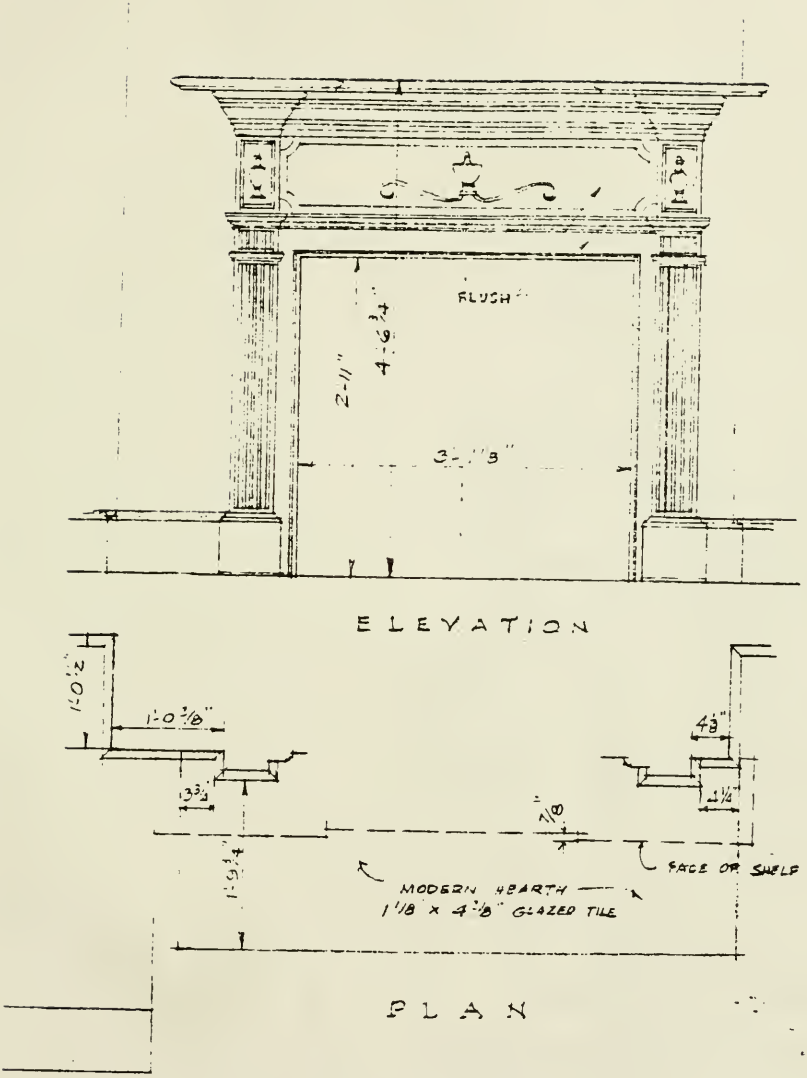


Old Economy Village - First Floor Plan
Prepared by Charles M. and Edward Stotz, Jr.

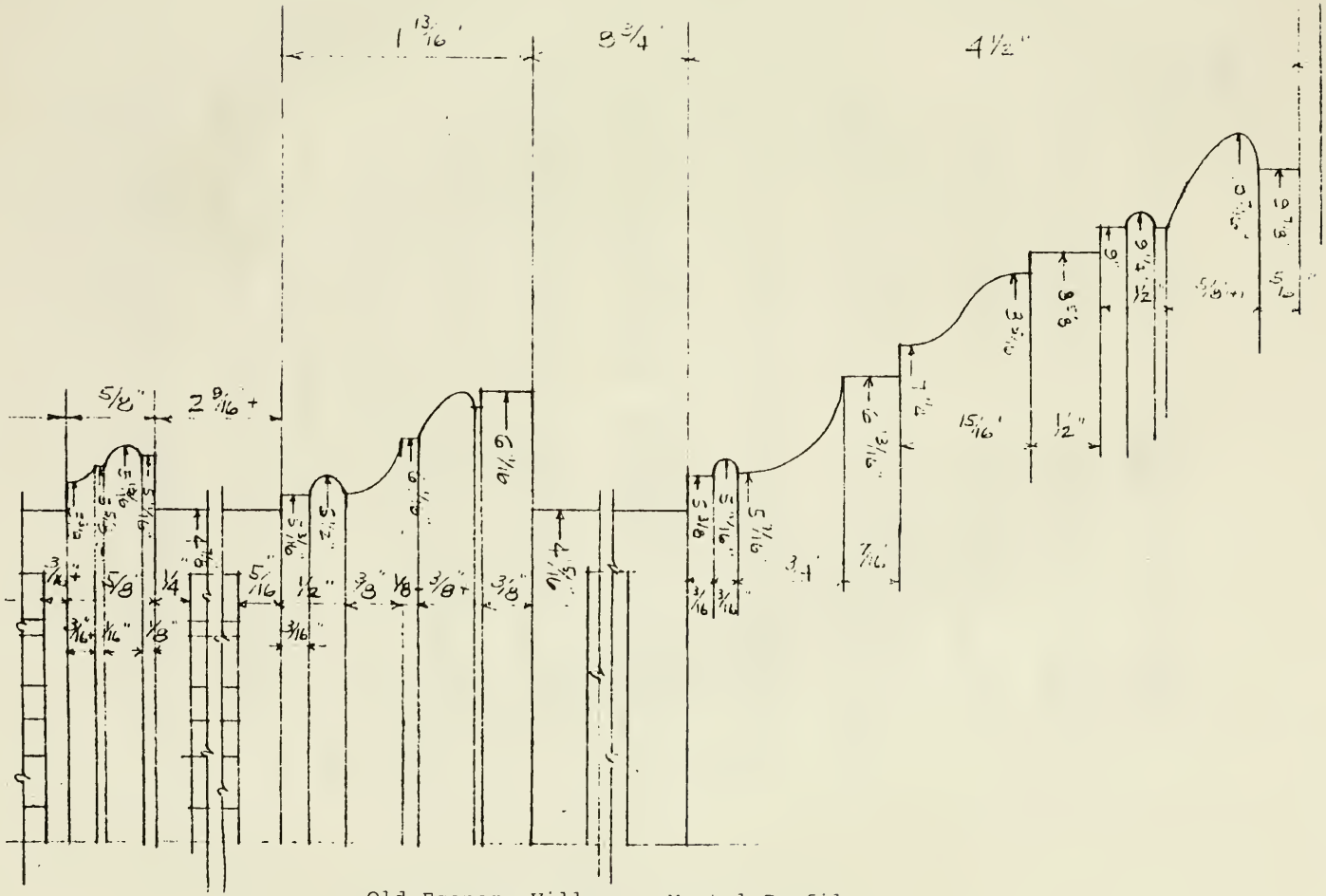


INTERIOR DOORS

Old Economy Village - Interior Doors
Prepared by Charles M. and Edward Stotz, Jr.



Old Economy Village - Mantel
Prepared by Charles M. and Edward Stotz, Jr.



Old Economy Village - Mantel Profile
Prepared by Charles M. and Edward Stotz, Jr.

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CONCLUSION

Brumbaugh, Okie and Stotz were superbly trained to use their eyes to make the necessary restoration decisions. Their formal education was in architecture; their knowledge of preservation developed from years of meticulous study and observation.

Brumbaugh mastered a craft-based approach of restoration by studying buildings which involved careful observation, the extensive study of parallel buildings, and the re-creation of the historic building processes. This had important limitations and major advantages. His work could not be contracted in advance, but as it progressed, because Brumbaugh's restoration technique had an intuitive quality.

In more recent years, the field of preservation has shifted its focus from the art of intuition towards a science. This evolution is due in part to the campaign of James Marston Fitch who made preservation an academic program with rigorous theories and courses.

Preservation must remain as much an art as a science because the trained eye is as important as the research.

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